

PTO/SB/08A (10-01)

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Substitute for Form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 2

**Complete if Known**

Application Number	10/809,317
Filing Date	03/24/2004
First Named Inventor	G. Ramanath
Group Art Unit	2813
Examiner Name	Kieten, Erik + Colleen Rodgers
Attorney Docket Number	5002.02-1

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date/ Issue Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
CR	AA	US - 4,996,075	02-1991	Ogawa et al.	
CR	AB	US - 5,057,339	10-1991	Oawa, Kazufumi	
CR	AC	US - 5,077,085	12-1991	Schnur et al.	
CR	AD	US - 5,079,600	01-1992	Schnur et al.	
CR	AE	US - 5,389,496	02-1995	Calvert et al.	
CR	AF	US - 5,468,597	11-1995	Calabrese et al.	
CR	AG	US - 5,500,315	03-1996	Calvert et al.	
CR	AH	US - 5,510,216	04-1996	Calabrese et al.	
CR	AI	US - 5,648,201	07-1997	Dulcey et al.	
CR	AJ	US - 5,939,150	08-1999	Stelzle et al.	
CR	AK	US - 6,348,240 B1	02-2002	Calvert et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
CR	AL	Ahrens, C. et al., "Electrical characterization of conductive and non-conductive barrier layers for Cu-metallization," Applied Surface Science, 1995, pp. 285-290, Vol. 91.	
CR	AM	Ding, P.J. et al., "Effects of the addition of small amounts of Al to copper: Corrosion, resistivity, adhesion, morphology, and diffusion," J. Appl. Phys., April 1994, pp. 3627-3631, Vol. 75(7).	
CR	AN	Ding, P.J. et al., "Oxidation resistant high conductivity copper films," Appl. Phys. Lett. May 1994, pp. 2897-2899, Vol. 64(21).	
CR	AO	McBrayer, J.D. et al., "Diffusion of metals in silicon dioxide," J. Electrochem. Soc., June 1986, pp. 1242-1246, Vol. 133(6).	
CR	AP	Raghavan, G. et al., "Diffusion of copper through dielectric films under bias temperature stress," Thin Solid Films, 1995, pp. 168-176, Vol. 262.	

Examiner  
SignatureDate  
Considered

12/1/05









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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>	
		Application Number	10/809,317
		Filing Date	03/24/2004
		First Named Inventor	G. Ramanath
		Group Art Unit	2813
		Examiner Name	<del>Kiolen, Erik</del> <i>Colleen Rodgers</i>
Sheet 2 of 2	Attorney Docket Number	5002.02-1	

	AQ	Reed, M.A. and Tour, J.M., "Computing with molecules," Scientific American, June 2000, pp. 86-93, Vol. 282(6).	
	AR	Sekiguchi, A. et al., "Microstructural and morphological changes during thermal cycling of Cu thin films," J. Japan Inst. Metals, April 2000, pp. 379-382, Vol. 64(5).	
	AS	ASM Handbook Vol. 5, Surface Engineering, ASM International: Materials Park, Ohio, 1994, pp. 315-318.	
	AT	Porterfield, Inorganic Chemistry, A Unified Approach, Addison-Wesley: Reading, Massachusetts, 1984, pp. 487-488.	
	AU	Moshfegh, A.Z. et al., "Bias Sputtered Ta Modified Diffusion Barrier in Cu/Ta(V/Si(111) Multilayer Structure, Thin Solid Films, 370:10-17 (July 2000).	
	AV	Simon, Richard A. et al., "Synthesis and Characterization of a New Surface Derivatizing Reagent To Promote the Adhesion of Polypyrrole Films to n-Type Silicon Photoanodes: N-(3-(Trimethoxysilyl)pyrrole," J. Am. Chem. Soc., 104:2031-2034 (1982).	
	AW	<del>Yin, H. et al., "Nanostructured iron-nickel thin films synthesized by electroless polyol deposition," Mater. Phys. Mech, 4:56-61 (2001).</del>	
	AX	Wolf et al., "Silicon Processing for the ULSI Era," Vol. 1 - Process Technology, 2 <sup>nd</sup> Ed., Lattice Press; Sunset Beach, CA, 2000, pp. 438, 782-783.	

Examiner Signature	<i>Colleen Rodgers</i>	Date Considered	12/1/05
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